

Title (en)

ELECTROACTIVE MATERIAL AND ITS USE IN ANODES FOR LITHIUM-ION CELLS

Title (de)

ELEKTROAKTIVES MATERIAL UND SEINE VERWENDUNG IN ANODEN FÜR LITHIUMIONEN-ZELLEN

Title (fr)

MATERIAU ELECTROACTIF ET SON UTILISATION AU SEIN D'ANODES POUR CELLULES AUX IONS LITHIUM

Publication

EP 2415106 B1 20140820 (DE)

Application

EP 10712435 A 20100401

Priority

- EP 2010054403 W 20100401
- EP 09157333 A 20090403
- EP 10712435 A 20100401

Abstract (en)

[origin: WO2010112580A1] The invention relates to a novel electroactive material comprising a graphitic carbon phase C and a (semi)metal phase and/or a (semimetal) oxide phase (MO_x phase) as well as the use of said electroactive material in anodes for lithium-ion cells. The invention also relates to a method for producing such materials. The electroactive material comprises: a) a carbon phase C; b) at least one MO_x phase, wherein M represents a metal or semimetal, x represents a number from 0 to x phase in the electroactive material according to the invention form substantially co-continuous phase domains, the maximum average distance between two adjacent domains of identical phases amounting to 10 nm, particularly 5 nm, and even more particularly 2 nm.

IPC 8 full level

H01M 4/48 (2010.01); **H01M 4/131** (2010.01); **H01M 4/133** (2010.01); **H01M 4/1391** (2010.01); **H01M 4/1393** (2010.01); **H01M 4/36** (2006.01); **H01M 4/38** (2006.01); **H01M 4/485** (2010.01); **H01M 4/587** (2010.01); **H01M 10/0525** (2010.01)

CPC (source: EP KR US)

H01M 4/131 (2013.01 - EP US); **H01M 4/133** (2013.01 - EP US); **H01M 4/1391** (2013.01 - EP US); **H01M 4/1393** (2013.01 - EP KR US); **H01M 4/362** (2013.01 - EP US); **H01M 4/38** (2013.01 - KR US); **H01M 4/48** (2013.01 - EP KR US); **H01M 4/587** (2013.01 - EP KR US); **H01M 4/485** (2013.01 - EP US); **H01M 10/0525** (2013.01 - EP US); **Y02E 60/10** (2013.01 - EP US)

Designated contracting state (EPC)

AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO SE SI SK SM TR

DOCDB simple family (publication)

WO 2010112580 A1 20101007; CA 2754711 A1 20101007; CN 102388488 A 20120321; CN 102388488 B 20140820; EP 2415106 A1 20120208; EP 2415106 B1 20140820; JP 2012523069 A 20120927; JP 5627666 B2 20141119; KR 20120007024 A 20120119; US 2012032109 A1 20120209; US 8992801 B2 20150331

DOCDB simple family (application)

EP 2010054403 W 20100401; CA 2754711 A 20100401; CN 201080015720 A 20100401; EP 10712435 A 20100401; JP 2012502689 A 20100401; KR 20117026136 A 20100401; US 201013262453 A 20100401